# AtlantECO

# UNDERSTANDING THE ATLANTIC OCEAN

A research & innovation project to evaluate and predict the Atlantic Ocean's health status & better manage the ecosystem services it provides to society.

# FIVE ecosystem services

The Ocean is a key part of the Earth's system. AtlantECO focuses on five ecosystem services that contribute to the well-being and health of all forms of life on our planet.

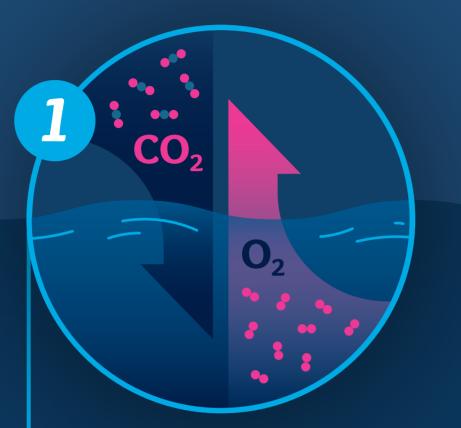


#### **Biodiversity**

Enabling a resilient blue economy, including microbiome-based biodiscoveries

# THREE research pillars

Research focuses on three pillars that underpin marine ecosystem services.



#### Climate support system

Pumping and storing carbon from the atmosphere



#### Food security

Supporting fisheries and aquaculture



### Healthy planet, healthy people

Transforming plastics, pollutants & biohazards



# Deep ocean life support system

Transfering matter & energy to deep waters and seabed ecosystems



#### Seascape & Ocean Connectivity

Compared to the continental landscape, the Ocean seascape is in constant motion with cold and warm fronts, currents and cyclones, like in the atmosphere. It plays a crucial role in transporting heat, nutrients, microbiomes and plastics across regions.



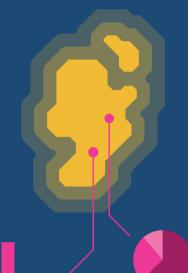
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# FOUR activity streams

AtlantECO is organised in four activity streams to assess and forecast the sustainability of Atlantic ecosystems.

#### Map the current state

Map the current state of marine ecosystem composition, functioning, health and services using high quality data at global scale.



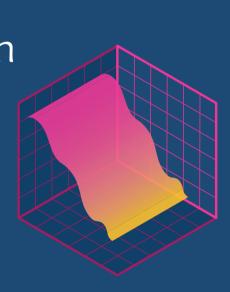
#### Generate new digital knowledge

Generate new digital knowledge from scientific expeditions and citizen science, using innovative numerical models.



#### Forecast changes

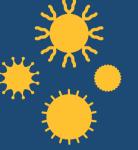
Forecast the impacts of human and climate pressures on complex ecosystems using eco-socio-economic models.



### Share and use knowledge

Share and use knowledge among scientists, industry, policy-makers and citizens. Make all data available via open databases.





#### Microbiomes

The Ocean microbiome includes all microscopic life in the Ocean. Every litre of seawater contains billions of microorganisms, whose composition and activity indicate the health of the marine ecosystem in which they live.



#### Plastics and the Plastisphere

Plastic is now part of the marine ecosystem. Its growing quantity raises concerns as it interacts with life in the Ocean. Plastic fragments are like drifting rafts that are colonised by a specific microbiome called the "Plastisphere".



